COMPETENCY GOAL 2: The learner will construct an understanding of forces and motion.			
Days	***Objective***	***Content Description***	***Suggested Activities***
		uniformly changing velocity: g = 9.8m/s/s.	
14/180	**2.02** Investigate and analyze forces as interactions that can change motion: • In the absence of a force, an object in motion will remain in motion or an object at rest will remain at rest until acted on by an unbalanced force. • Change in motion of an object (acceleration) is directly proportional to the unbalanced outside force and inversely proportional to the mass. • Whenever one object exerts a force on another, an equal and opposite force is exerted by the second on the first.	• Investigate the property of inertia as related to mass. • Mathematically and graphically analyze weight as the relationship between the acceleration due to gravity and mass of an object:. $F_g = mg$ • Investigate mathematically and graphically $F = ma$ with respect to acceleration as a change in motion. • Investigate balanced and unbalanced forces using the equation: $F = ma$. *(Solve for the unbalanced force in simple situations--students are not expected to use trigonometry.)* • Investigate friction as force that opposes the motion of an object. • Analyze Newton's Third Law as the relationship described by Force $_{\text{of Object A on Object B}}$ = - Force $_{\text{of Object B on Object A}}$	• Investigate forces using spring balances and/or force probes. • **Enrichment Lab:** Egg drop soup- What affects terminal velocity?